

Claims

1. A machine tool particularly for the synchronous machining of workpieces, said tool being comprised of
 - two or more spindle units (2, 3), which run parallel in a machining unit for reception of tools, and
 - repositioning devices (V_x , V_y , V_z) for precise adjustment of the position of the spindle units (2, 3) in relation to one another, preferably in all three directions x , y , and z of the orthogonal co-ordinate system in the machining unit (4),**characterized in that** the repositioning devices (V_x , V_y) for displacing at least one of the spindle units (2, 3) in at least one of the directions x and/or y consist of an eccentric bush (5, 6), which can be rotated about a central shaft (B_1 , B_2) and locked and in which the spindle units (2, 3) are mounted eccentrically, parallel to said central shaft (B_1 , B_2).
2. A machine tool according to Claim 1, **characterized in that** said repositioning devices (V_x , V_y , V_z) can be activated independently of each other and that the repositioning in the machining plane (x , y) each is executed by rotating said eccentric bushes (5, 6) and is superposed in one of the two spindle units (2, 3) by a movement in z -direction.
3. A machine tool according to any of the preceding Claims 1 or 2, **characterized in that** the repositioning devices (V_x , V_y) attack tangentially at the outer rim of said eccentric bushes (5, 6).
4. A machine tool according to any of the preceding Claims 1, 2 or 3, **characterized in that** the repositioning devices (V_x , V_y , V_z) can be driven mechanically, electrically, or hydraulically.
5. A machine tool according to any of the preceding claims, **characterized in that** the repositioning devices (V_x , V_y) are comprised of retainer bolts (10) disposed parallel to the spindle axis and comprised of groove blocks (11) attacking said retainer bolts and being actuated by repositioning cylinders (12).

6. A machine tool according to any of the preceding claims, **characterized by** a measuring system (15) for recording the repositioning path of the groove blocks (11) disposed at said repositioning cylinders (12).
- 5 7. A machine tool according to any of the preceding claims, **characterized in that** the repositioning path in x, y direction lies in a range from 0.1 to 0.5 mm and in a range from 0.8 to 5 mm in z-direction.
- 10 8. A machine tool according to any of the preceding claims, **characterized in that** the repositioning can be controlled and regulated with an accuracy of $< 1 \mu\text{m}$.